

# **INTEGRATED SUPPORT ENVIRONMENT (ISE) ELEMENT USERS GUIDE**

(Deliverable 0424)  
(Revision 1)

**Project Issue Tracking System  
(PITS)**

**Volume 3 of 6**

**March 11, 1998**

**Prepared by:**

**INTERMETRICS**  
WVU/NASA Software IV&V Facility  
100 University Drive  
Fairmont, WV 26554

**Prepared for:**

**NASA Goddard Space Flight Center**  
EOSDIS Project, Code 505  
Greenbelt, MD 20770

# **INTEGRATED SUPPORT ENVIRONMENT (ISE) ELEMENT USERS GUIDE**

(Deliverable 0424)  
(Revision 1)

**Project Issue Tracking System  
(PITS)**

**Volume 3 of 6**

**March 11, 1998**

PREPARED BY:

---

Llew Williams  
Technical Lead

REVIEWED BY:

---

Randy Hefner  
Task Leader

PREPARED BY:

---

Greg Rousseau  
Task Member

RECEIVED BY:

---

Gerald Windley  
Document Log Manager

APPROVED BY:

---

Frank Rockwell  
Program Manager

**INTERMETRICS**  
WVU/NASA Software IV&V Facility  
100 University Drive

*Integrated Support Environment (ISE) System Requirements*

Fairmont, WV 26554

## TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
<b>1.1 Project Issue Tracking System (PITS) .....</b>	<b>1</b>
1.1.1 Why the PITS? .....	1
1.1.2 What is the PITS? .....	1
1.1.3 PITS GUI.....	3
1.1.3.1 PITS Login Screen.....	3
1.1.3.2 PITS Executive Interface Screen .....	4
1.1.3.2.1 Access/Security Mechanisms.....	6
1.1.3.3 PITS Technical Issue Memorandum (TIM) Screen.....	7
1.1.3.3.1 TIM Issue and Impact Category Fields .....	9
1.1.3.3.1.1 TIM Requirement Issue Guidelines.....	9
1.1.3.3.1.2 TIM Interfaces Issue Guidelines .....	10
1.1.3.3.1.3 TIM Design Issue Guidelines.....	10
1.1.3.3.1.4 TIM Implementation Issue Guidelines .....	10
1.1.3.3.1.5 TIM Integration & Test Issue Guidelines .....	10
1.1.3.3.1.6 TIM Architecture Issue Guidelines .....	11
1.1.3.3.1.7 TIM Engineering Processes Issue Guidelines .....	11
1.1.3.3.1.8 TIM Programmatic Issue Guidelines .....	11
1.1.3.3.1.9 TIM Basis of Estimates Issue Guidelines .....	11
1.1.3.3.1.10 TIM Operations Issue Guidelines.....	12
1.1.3.3.1.11 TIM Release Transition Issue Guidelines.....	12
1.1.3.3.2 TIM Issue Domain Fields.....	12
1.1.3.3.3 TIM Milestone Field .....	13
1.1.3.3.4 TIM Issue Severity/Criticality Fields .....	13
1.1.3.3.5 TIM Visibility Field .....	14
1.1.3.3.6 TIM Issue Status Field .....	14
1.1.3.3.7 TIM ID Field.....	14
1.1.3.3.8 TIM Date Field .....	15
1.1.3.3.9 TIM Issue Originator Field.....	15
1.1.3.3.10 TIM State/Date Table .....	15
1.1.3.3.11 TIM Issue Subject/Description Fields .....	15
1.1.3.4 PITS Impact Description Screen .....	15
1.1.3.5 PITS Recommendations Screen.....	16
1.1.3.6 PITS Closure Criteria Screen .....	17
1.1.3.7 PITS Relationships Screens.....	17
1.1.3.8 PITS Resolution Chronology Screens .....	21
1.1.3.9 PITS Review Item Discrepancy (RID) Screen.....	22
1.1.3.10 PITS Issue Selection Screen .....	24
1.1.3.11 PITS Database Query Screen.....	26
1.1.3.11.1 Metadata Query Frame.....	26
1.1.3.11.2 Date Query Frame.....	27
1.1.3.11.3 Search String Query Frame .....	28
1.1.3.11.3.1 Update Strings Query Dialog .....	28
1.1.3.11.4 Query Selection Table .....	29
1.1.3.12 PITS Query Results Screen.....	29
1.1.3.13 PITS Issue Reporting Screen.....	31
1.1.3.14 PITS Aging Report Screen .....	32
1.1.3.15 PITS RID Manager Interface Screen .....	32
1.1.3.16 PITS RID Email Interface Screen.....	33

*Integrated Support Environment (ISE) Element Users Guide*

1.1.3.17 PITS Database Snapshot Screen .....	34
1.1.3.18 PITS Maintenance Selection Screen .....	35
1.1.3.19 PITS Maintenance Panel Screen.....	37
1.1.3.20 PITS Change Password Screen.....	37
1.1.4 PITS Client Installation and Startup.....	38

## TABLE OF EXHIBITS

<u>Exhibit</u>	<u>Page</u>
EXHIBIT 1.1.3-1 PITS GUI HIERARCHY .....	3
EXHIBIT 1.1.3-2 PITS LOGIN SCREEN .....	4
EXHIBIT 1.1.3-3 PITS EXECUTIVE INTERFACE SCREEN .....	5
EXHIBIT 1.1.3-4 CLASSIFICATION OF USER ACCESS LEVEL.....	7
EXHIBIT 1.1.3-5 PITS TIM INFORMATION.....	7
EXHIBIT 1.1.3-6 PITS TIM SCREEN.....	8
EXHIBIT 1.1.3-7 PITS TIM ISSUE & IMPACT CATEGORY VALUES .....	9
EXHIBIT 1.1.3-8 PITS TIM DOMAIN VALUES.....	13
EXHIBIT 1.1.3-9 PITS TIM MILESTONE VALUES .....	13
EXHIBIT 1.1.3-10 PUBLIC ISSUE SEVERITY & CRITICALITY COMBINATIONS .....	14
EXHIBIT 1.1.3-11 PITS TIM VISIBILITY VALUES.....	14
EXHIBIT 1.1.3-12 PITS IMPACT DESCRIPTION SCREEN.....	16
EXHIBIT 1.1.3-13 PITS RECOMMENDATIONS SCREEN .....	17
EXHIBIT 1.1.3-14 PITS CLOSURE CRITERIA SCREEN .....	17
EXHIBIT 1.1.3-15 PITS RELATIONSHIPS SCREEN.....	18
EXHIBIT 1.1.3-16 PITS RELATIONSHIP ENTRY SCREEN .....	19
EXHIBIT 1.1.3-17 PITS REQUIREMENT RELATIONSHIP MANAGER SCREEN.....	20
EXHIBIT 1.1.3-18 PITS RESOLUTION CHRONOLOGY SCREEN.....	22
EXHIBIT 1.1.3-19 PITS RESOLUTION CHRONOLOGY ENTRY SCREEN .....	22
EXHIBIT 1.1.3-20 PITS RID SCREEN .....	23
EXHIBIT 1.1.3-21 PITS ISSUE SELECTION SCREEN.....	25
EXHIBIT 1.1.3-22 PITS DATABASE QUERY SCREEN.....	26
EXHIBIT 1.1.3-23 SEARCH STRINGS SCREEN .....	29
EXHIBIT 1.1.3-24 PITS QUERY RESULTS SCREEN.....	30
EXHIBIT 1.1.3-25 PITS ISSUE REPORTING SCREEN .....	31
EXHIBIT 1.1.3-27 PITS RID MANAGER SCREEN .....	33
EXHIBIT 1.1.3-28 PITS RID EMAIL INTERFACE SCREEN .....	34
EXHIBIT 1.1.3-29 PITS DATABASE SNAPSHOT SCREEN .....	35
EXHIBIT 1.1.3-30 PITS MAINTENANCE SELECTION SCREEN .....	36
EXHIBIT 1.1.3-31 PITS MAINTENANCE PANEL SCREEN.....	37
EXHIBIT 1.1.3-32 PITS CHANGE PASSWORD SCREEN.....	38

## **1.1 Project Issue Tracking System (PITS)**

### **1.1.1 Why the PITS?**

The Project Issue Tracking System (PITS) was developed to provide an automated mechanism to document and track issues in a way that enhances overall IV&V effectiveness. The PITS supports a rigorous, repeatable process which facilitates the identification and resolution, over time, of important issues and the analysis of trends. It is targeted at the complete system development lifecycle and the effective monitoring of all categories and domains of issues that significantly affect ongoing project success. This distinguishes it from other issue tracking systems which primarily focus on project milestone issues (like Review Item Discrepancy (RID) tracking systems), development product related issues (like the Distributed Defect Tracking System (DDTS)), etc.

Issues have a lifecycle of their own: identification (existence), documentation (description/prescription), publication (opened), remedial actions (resolution), and termination (closure). Unlike Technical Analysis Memoranda (TAMs), the PITS covers the complete issue lifecycle. TAMs, and other similar IV&V reporting mechanisms (e.g., Technical Analysis Reports (TARs)), stop after the issue publication phase; there is no formal mechanism to follow-up on the successful resolution of issues. Consequently, on the surface, an “old” TAM looks like an “old” analysis and set of issues. An “old” issue is only really “old” when it is no longer an issue (i.e., the issue has been satisfactorily resolved or overtaken by events). The PITS is the primary mechanism for documenting the extent to which issues generated at a given moment-in-time are still important at a later moment-in-time.

TARs and (to a much lesser extent) TAMs document fairly broad sets of issues at varying levels of importance (severity and criticality) that result from comprehensive analyses. TAMs, in particular, are both a timely and a thorough mechanism for understanding why and what issues exist, but the overall importance of a TAM is diluted by the varying importance of the issues it raises. Issues at all levels of importance should be documented (as they are, and will continue to be, in TAMs). However, those of marginal-value (i.e., do not significantly affect success) need not be given a high-level of management attention. The PITS filters-out issues of marginal-value, so that project management can concentrate on the resolution of the issues that truly matter.

Trend analysis is a valuable mechanism for determining the health of a project, over time. For example, how quickly issues are resolved provides a quantitative prognosis of overall project success. The PITS, because of its inherent structure and scope, fully supports extensive near/long-term trend analyses.

### **1.1.2 What is the PITS?**

The PITS is an issue management environment consisting of an issue repository, or set of interoperable issue repositories. This document focuses on the “EOSDIS-IVV” repository that exists. IV&V analysts enter and update issue information via client-server interface screens. The client runs in a local PC Windows environment that connects to the Sybase Relational Data Base Management System (RDBMS) Sun SPARCserver at the NASA Software IV&V Facility in Fairmont, WV. The server location is transparent to users, other than possibly a small deviation in access times over the Wide Area Network (WAN). Non-IV&V users will have view (i.e.,

selective, read-only) access to the “EOSDIS-IVV” PITS repository from NASA-approved client application or PITS World Wide Web (WWW) browser sites (e.g., GSFC, HITS, etc.).

The PITS is configurable to a project. The values associated with issue characterization are specified in repository data base tables. The PITS issue characterization entities are:

- *Issue & Impact Categories*: Keyed to the system development lifecycle (values: “Requirements”, “Integration & Test”, etc.) and project management (values: “Engineering Processes”, “Programmatics”, “Basis Of Estimates”, etc.);
- *Issue Domains*: Keyed to the intrinsic project development activities and phases (values: “ECS Rel A”, “EGS Version 2”, “EBnet”, etc.);
- *Issue Milestone*: Keyed to formal reviews (values: “PDR”, “CDR”, etc.), used only if applicable to an issue-set;
- *Issue Severity*: (3 values: “Major”, “Moderate”, “Minor”);
- *Issue Criticality*: (3 values: “Critical”, “Essential”, “Fulfillment”);
- *Issue Visibility*: (2 values: “Public”, “Private”);
- *Issue Originator*: Author of the issue; and
- *Issue Sponsor*: (values: “Task01”, “Task02”, “Task04”, “Task05”, etc.).

Also, *Issue Status* (6 values: “Draft”, “Withdrawn”, “Opened”, “Closed”, “Closed With Concerns”, “Re-Opened) and important *Issue Dates* (6 values: “Draft”, “Withdrawn”, “Opened”, “Closed/Closed With Concerns”, “Re-Opened”, “Updated”) are maintained within the PITS.

The vehicle for documenting and tracking issues within a PITS repository is the Technical Issue Memorandum (TIM). A TIM is a named, discrete collection of metadata (searchable issue characterization and status information), descriptive text, prescriptive text, and resolution progress information. Each TIM is focused on a clearly defined set of issues at the same level of importance. Each TIM supports the tracking of issue resolution progress to closure (via the PITS “Resolution Chronology”).

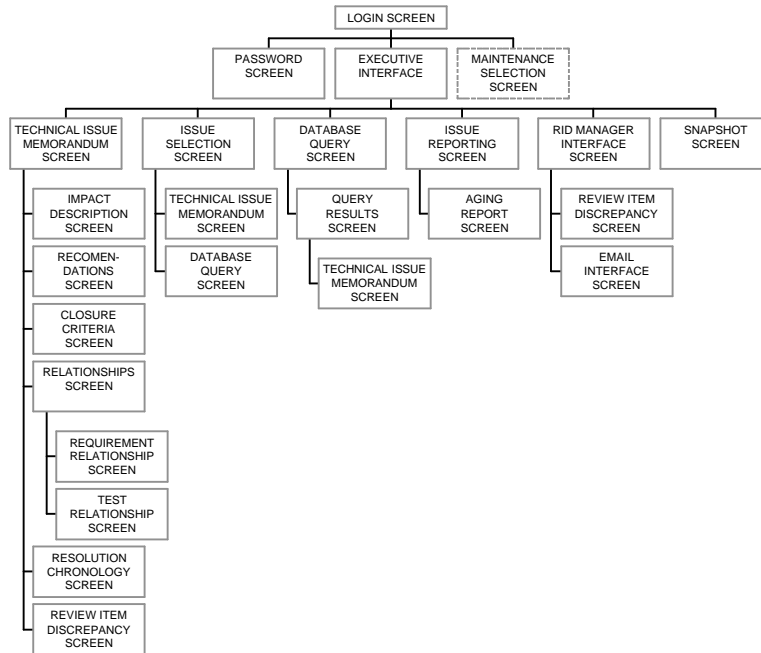
TIMs can be generated “stand-alone”, as issues are identified. However, TIMs, TARs, TAMs, RIDs, etc. can exhibit close relationships. A TAM, for example, may raise issues which necessitate formal tracking (i.e., they are of more than marginal-value). A TIM, or set of TIMs, would be generated based on the TAM. The PITS enables the resulting TIM(s) to be “linked” to the TAM to minimize data entry redundancy (i.e., to fully describe the subject issues by reference to the TAM). Multiple relationships are possible: TIM-TIM, TIM-TAM, TIM-TIM-TAM, TIM-RID, TIM-Requirement, etc. (via the PITS “Relationships”). At the current time, these relationships are structured “textual” references or “requirement” relationships. A query builder capability is provided to search for the related requirement. In the future, the relationships will be electronic, such that “clicking” on the related document will display a copy of that document (analogous to a hypertext link). Linkage across multiple repositories within a single PITS environment is also planned.

An on-line query capability is provided to permit metadata, keyword, and key phrase (text pattern) searches for TIMs that match viewer-desired characteristics. On-screen and hard copy

reporting is available, and will continue to be enhanced over time. To support trend analysis, a monthly “snapshot” of the PITS’ repository metadata (TIM-by-TIM) will be permanently archived at the server site. This will enable the generation of standard and ad hoc statistical trend-analysis reports, over time.

### 1.1.3 PITS GUI

The PITS GUI can either be Windows (PC client) or Motif (Solaris client) based and is highly intuitive. Currently only the PC client version is available. Exhibit 1.1.3-1 delineates the PITS GUI hierarchy.

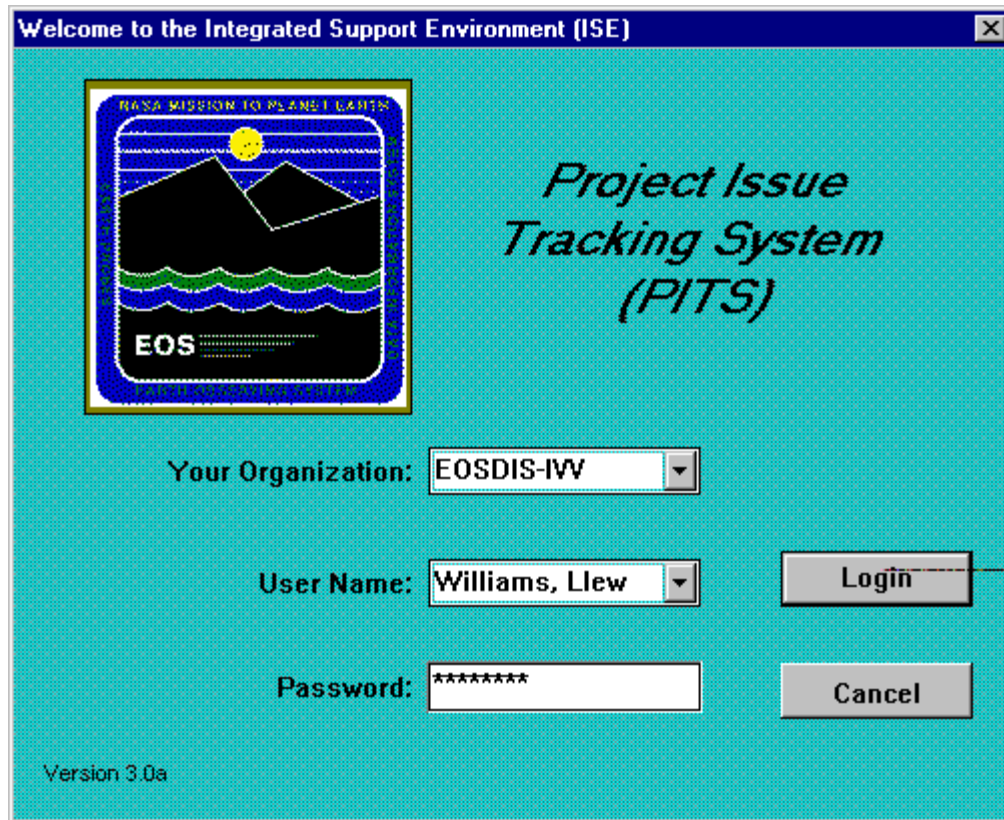


**Exhibit 1.1.3-1 PITS GUI Hierarchy**

#### 1.1.3.1 PITS Login Screen

The PITS user tooling and data base repository structure are straight-forward. The key to making the PITS value-added, is human. While it is easy to use, its effective use depends upon a determined effort by everyone to fully-develop the sets of issues important to project success and get them into the PITS in a timely fashion. The PITS is the cornerstone of IV&V activities and the quantitative basis for the periodic IV&V “Findings Meetings” with senior NASA project management. The PITS continues to evolve, and your proactive efforts and suggestions for improvement are solicited.

**Welcome to the PITS!**



**Exhibit 1.1.3-2 PITS Login Screen**

**FIELDS:**

1. Your Organization - Select the organization which you are associated with by clicking on an item listed in the pull-down combo box. The "User Name" combo box is populated with all individuals having accounts associated with the organization selection.
2. User Name - Select your user name by clicking on an item listed in the pull-down combo box. You may start typing the last name in the entry part of the combo box pull down to quickly locate your user name. However, you must still click on you name once it is visible.
3. Password - Enter your PITS account password and then hit return or select the "Login" button.

**BUTTONS:**

1. Login - Upon selecting this button, account information is verified. If the account information is correct, the PITS Executive Interface screen (see section 4.2.3.2) is displayed. If the information is incorrect, a message dialog is displayed asking whether or not you wish to try again.
2. Cancel - Selecting this button exits the PITS Login Dialog Box.

The PITS version number is displayed in the bottom left corner of the login screen. This is useful information when discrepancies or bugs are reported to PITS maintenance and operations personnel.

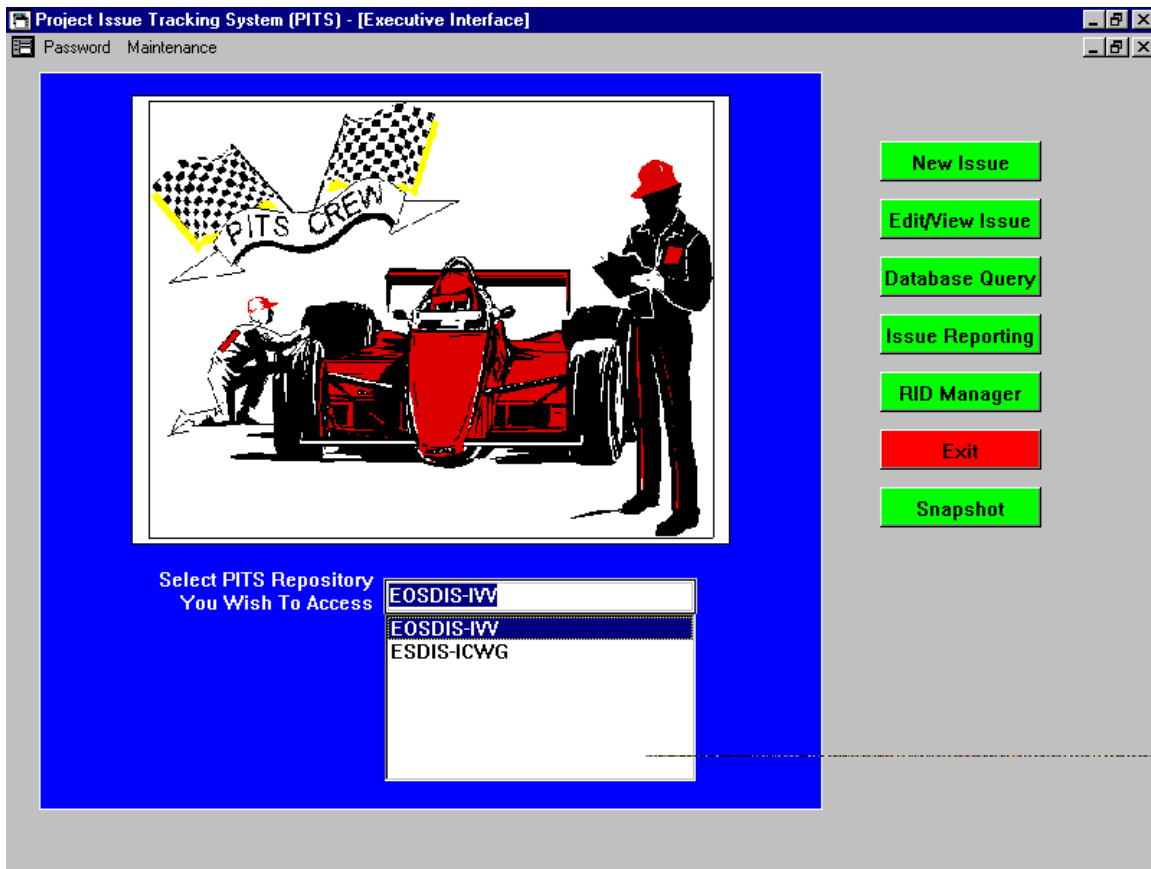
### 1.1.3.2 PITS Executive Interface Screen

The PITS database schema accommodates one or more repositories , each associated with a project organization (e.g., EOSDIS IV&V, ESDIS, ICWG, etc.). The PITS environment is client-server based. The client software (graphical user interface (GUI)) resides on a user-local PC Windows workstation. The PITS database resides on a Sun Unix server which can either be located locally or remotely. Currently, the "EOSDIS-IVV" PITS Sybase database resides at the NASA Software IV&V Facility in Fairmont, WV. ANSI standard Structured Query Language

(SQL) syntax is utilized within the application. Therefore, a different database backend (e.g. Microsoft SQL Server) could be utilized with minor modifications to the application software.

Each PITS repository within a PITS environment is accessible by all authorized users. Each PITS repository contains an organizationally-generated (e.g., EOSDIS-IVV, etc.) set of TIMs. The number of TIMs contained within a repository is, essentially, unlimited. Access restrictions are described in section 4.2.3.2.1.

Exhibit 1.1.3.2-1 depicts the main PITS executive interface screen. It is from this screen that most PITS functionality is accessible.



**Exhibit 1.1.3-3 PITS Executive Interface Screen**

**FIELDS:**

1. Repository Selection  
This field designates which on-line PITS repository you wish to access. This field is directly below the PITS CREW graphic.

**BUTTONS:**

1. New Issue  
Select this button to add a new issue for the repository selected. Upon selection the TIM Form (see section 4.2.3.3) will be displayed. Note that this button is disabled if you are a visitor or are associated with an organization different from the repository selected.
2. Edit/View Issue

Select this button to view a table of all issues for the repository selected. Upon selection the Issue Selection screen (see section 4.2.3.10) will be displayed. If the repository selected does not coincide with your organization, you will see all issues except those in the DRAFT state.

3. Database Query  
Select this button to obtain the Database Query screen (see section 4.2.3.11). Database queries are permitted on all metadata, text, and dates maintained within the PITS repository.
4. Issue Reporting  
Select this button to obtain the PITS Issue Reporting screen (see section 4.2.3.13). All issue report formats are made available through the Issue Reporting screen.
5. RID Manager  
Selecting this button yields the display of the RID Manager Interface screen (see section 4.2.3.18). This button is only enabled for individuals with level 2 access or greater.
6. Exit  
Selecting this button exits the PITS.
7. Snapshot  
Select this button to enable the PITS Database Snapshot screen (see section 4.2.3.20). This button is only enabled for individuals with level 2 access or greater. Basically, monthly snapshots are taken to support trend analysis activities.

#### **MENUS:**

1. Password  
This menu pulldown has only one entry. Selecting this menu will display the Change Password screen (see section 4.2.3.23).
2. Maintenance  
This menu pulldown has only one entry. This menu is only visible to individuals possessing level 1 access or greater. Selecting this menu will display the PITS Maintenance Selection screen (see section 4.2.3.21).

#### **1.1.3.2.1 Access/Security Mechanisms**

The PITS provides access/security mechanisms at both the repository and user level. PITS accounts are added for a given repository and user access level. At the repository level, users associated with an organization other than the currently selected PITS repository are restricted from viewing issues designated with a status of DRAFT or visibility of PRIVATE. Additionally, users associated with an organization other than the currently selected PITS repository are only granted read privileges. This is noticeable since many of the buttons (e.g. Create Issue, Save, etc...) are disabled.

Four classifications of user access levels are supported by the PITS. They are reflected in Exhibit 1.1.3-4.

Access Level	User Classification	Privileges
0	Developer System Administrator M&O Personnel	These individuals basically perform maintenance and operations for the PITS. This includes the addition of new user accounts.
1	Program Manager	This individual can do all that the tier one manager can do plus reopen issues that were closed, update PITS metadata values, and create/review database trend analysis snapshots.
2	Task Lead/Tier One Manager	These individuals are permitted to create and update issues regardless of status (DRAFT, OPEN, CLOSED, et...).
3	Analyst/Data Entry Personnel	These individuals are permitted to create issues and

		update issues while they are in the DRAFT state. Once OPEN, these individuals can only add resolution chronology entries.
4	Visitor Account	Read only access where TIMs in the DRAFT state or classified with visibility of PRIVATE are not viewable.

**Exhibit 1.1.3-4 Classification of User Access Level**

### 1.1.3.3 PITS Technical Issue Memorandum (TIM) Screen

Each PITS Technical Issue Memorandum (TIM) contains the information identified in Exhibit 1.1.3.3-1.

TIM Information	Per TIM	Type
Metadata Items	12	Values
Issue Subject	1	Text
Issue Description	1	Text
Impact Description	1	Text
Recommendations	1	Text
Closure Criteria	1	Text
Relationships	n	Links
Resolution Chronology	m	Text Units

**Exhibit 1.1.3-5 PITS TIM Information**

#### TIM Metadata Item List

The TIM metadata is a collection of electronically-searchable issue characterization and status information. There are 12 metadata items which are mandatory-entry. Ten metadata items are associated with issue characterization and two are associated with status.

1. Issue Category
2. Impact Category
3. Domain #1
4. Milestone (optional\*, associated with Domain #1)
5. Domain #2 (optional\*)
6. Issue Severity
7. Issue Criticality
8. Visibility
9. Issue Originator
10. Issue Sponsor
11. Issue Status
12. Issue Dates (automatically captured)

\* A value of "N/A" (not applicable) can be assigned to this metadata object class.

Issue Category Interfaces		Issue Subject SDPS/CSMS Internal Interface Design Definitions										
Impact Category Design	Issue Severity Major	<table border="1"> <thead> <tr> <th>Status</th> <th>Date</th> <th>Analyst</th> </tr> </thead> <tbody> <tr> <td>Open</td> <td>05-01-96</td> <td>Izumi, Debbie</td> </tr> <tr> <td>Updated</td> <td>05-15-96</td> <td>Hefner, Randy</td> </tr> </tbody> </table>		Status	Date	Analyst	Open	05-01-96	Izumi, Debbie	Updated	05-15-96	Hefner, Randy
Status	Date	Analyst										
Open	05-01-96	Izumi, Debbie										
Updated	05-15-96	Hefner, Randy										
Domain #1 ECS Rel B	Issue Criticality Critical											
Milestone CDR	Issue Sponsor Task 6	Issue Status Open	TIM ID EOSDIS-IWV - TIM - 1107 Date 05-01-96 View RID Save Print Exit									
Domain #2 N/A	Visibility Public	Issue Originator Gallant, Frank										
Issue Description Internal interfaces as defined in the DID 313 Release B CSMS/SDPS Internal Interface Control Document and the various DID 305 Specifications do not provided the level of specificity conducive to a detailed design that is used for developing code for implementation. Based on analysis of internal interfaces in both the DID 313 and 305s, the following overall deficiencies were noted:  1) There is no internal interface Level 4 L4 requirements traceability to design provided in DID 313. Furthermore, L4 interface requirements are not explicitly identified as such within the subsystem design specifications [DID 305s].  2) The DID 313 provides a 744 page Data Dictionary that list all public classes in SDPS and CSMS but fails to uniquely identify each interface (both sides of the interface) and assign a unique identifier.  3) Dependencies on system modes and states are not identified.												
Impact Description    Recommendations    Closure Criteria    Relationships    Resolution Chronology												

Exhibit 1.1.3-6 PITS TIM Screen

The quantity and meaning of the metadata items cannot be changed without changing the PITS software and/or repository structure. However, the actual content of the metadata items (i.e., the possible sets of values) can be tailored, to a large extent, for different PITS' environments.

All metadata and "Issue Description" information are mandatory, and must be entered prior to the TIM being "Saved". Later entered information (i.e., "Impact Description", etc.) utilize their own "pop-up" windows and are "Saved" individually. The usual order-of-entry is to enter all the metadata followed by the "Issue Description", however, the exact order is not important. Once you have entered all the metadata and the "Issue Description", click on the **Save** button to record the TIM in the repository. If this is a new TIM, the automatically assigned TIM name will appear in the "TIM ID" field.

The fields associated with the TIM form are detailed in the following subsections so that guidelines for entry can also be specified. The standard Windows "Edit" pulldown menu is also accessible from the TIM Form to allow for cutting, copying, and pasting information. Push buttons which exist on the TIM Form are discussed below:

#### BUTTONS:

1. Create/View RID  
The Create RID or View RID button is utilized to transition to the RID Form screen (see section 4.2.3.9). A Review Item Discrepancy (RID) can be generated from an existing TIM where most of the RID fields are automatically assigned values from the TIM. This button is labeled "Create RID" until an associated RID is created. After that, it is labeled "View RID".
2. Save  
This button should be selected to save TIM information to the database following creation or modification.
3. Print  
Selection of this button initiates TIM print processing. Print options to view the TIM on screen, save to file, and print to printer are subsequently offered.

4. Exit  
Selection of this button closes the TIM screen and returns to the point from which the TIM screen was displayed.
5. Impact Description  
Select this button to obtain the Impact Description entry screen (see section 4.2.3.4).
6. Recommendations  
Select this button to obtain the Recommendations entry screen (see section 4.2.3.5).
7. Closure Criteria  
Select this button to obtain the Closure Criteria entry screen (see section 4.2.3.6).
8. Relationships  
Select this button to obtain the Relationships screen (see section 4.2.3.7) displaying a table of links to requirements and textual items related to the TIM.
9. Resolution Chronology  
Select this button to obtain the Resolution Chronology screen (see section 4.2.3.8) displaying a table of chronology entries related to the TIM.

### 1.1.3.3.1 TIM Issue and Impact Category Fields

*Issue Category* and *Impact Category* metadata items contain identical sets of 11 values within the EOSDIS-IVV repository. The PITS TIM screen has two combo boxes labeled “Issue Category” and “Impact Category”. Select one of the permissible metadata values from each combo box. The order of entry is not important, however, both entries are mandatory. Entries can be changed at any time prior to the TIM being “Opened”. Thereafter, only personnel with Level 1 or 2 access can change either entry. The following selection guidelines are representative of the situations likely to be encountered when deciding which value is most applicable in each case. They are listed in Exhibit 1.1.3-7

Issue & Impact Category Values	Data Entry Guideline Reference
Requirements	Section 4.2.3.3.1.1
Interfaces	Section 4.2.3.3.1.2
Design	Section 4.2.3.3.1.3
Implementation	Section 4.2.3.3.1.4
Integration & Test	Section 4.2.3.3.1.5
Architecture	Section 4.2.3.3.1.6
Engineering Processes	Section 4.2.3.3.1.7
Programmatics	Section 4.2.3.3.1.8
Basis Of Estimates	Section 4.2.3.3.1.9
Operations	Section 4.2.3.3.1.10
Release Transition	Section 4.2.3.3.1.11

### Exhibit 1.1.3-7 PITS TIM Issue & Impact Category Values

#### 1.1.3.3.1.1 TIM Requirement Issue Guidelines

Issues which can be categorized into one of the following correspond to valid requirement category selections:

- L1/2/3/4 requirements technical integrity (traceability, quality, testability) issues,

- Requirements volatility (growth, shrinkage, redefinition, release-migration) issues,
- L3 requirements-by-release (RBR) allocation issues,
- L3 and L3 RBR requirements criticality assignment issues,
- L4 requirements risk assignment issues, and
- RTM repository/baseline quality issues.

#### **1.1.3.3.1.2 TIM Interfaces Issue Guidelines**

Issues which can be categorized into one of the following correspond to valid interface category selections:

- IRD technical integrity (traceability, quality, testability) issues,
- ICD technical integrity (IRD satisfaction) issues,
- ICD to I/F design-description issues (nominal impact category: “Design”),
- I/F implementation issues (nominal impact category: “Implementation”),
- I/F testing issues (nominal impact category: “Integration & Test”), and
- RTM & StP repository/baseline quality issues (as applicable to interfaces).

#### **1.1.3.3.1.3 TIM Design Issue Guidelines**

Issues which can be categorized into one of the following correspond to valid design category selections:

- L4 requirements allocation to design components (object classes, COTS, etc.) issues,
- Design quality (requirements satisfaction, domain partitioning, testability, etc.) issues,
- OMT quality (completeness, structure, COTS integration, etc.) issues, and
- StP repository/baseline quality issues.

#### **1.1.3.3.1.4 TIM Implementation Issue Guidelines**

Issues which can be categorized into one of the following correspond to valid implementation category selections:

- Code and unit test (complexity/structure, function/performance, validation, etc.) issues, and
- COTS/GOTS/etc. implementation (scripts, wrappers, glue-code, etc.) issues.

#### **1.1.3.3.1.5 TIM Integration & Test Issue Guidelines**

Issues which can be categorized into one of the following correspond to valid integration and test category selections:

- Developer I&T (e.g., segment, system, IATO) issues,
- Component Acceptance Test issues,
- EOS Ground System (EGS) I&T issues,

- I&T tool (ETS/XRunner/etc.) utilization issues,
- Test dataset (definition, availability, etc.) issues, and
- Science software I&T process testing issues.

#### **1.1.3.3.1.6 TIM Architecture Issue Guidelines**

Issues which can be categorized into one of the following correspond to valid architecture category selections:

- Design mapping (planned physical instantiation - what/where/when) issues,
- Delivery configuration (actual physical instantiation - what/where) issues,
- Sizing and performance (capacity, throughput, etc.) issues,
- COTS/GOTS/etc. distributed heterogeneous environment issues, and
- Technology evolution issues.

#### **1.1.3.3.1.7 TIM Engineering Processes Issue Guidelines**

Issues which can be categorized into one of the following correspond to valid engineering processes category selections:

- System/software engineering process definition and execution/compliance issues,
- Development support tool (RTM, StP, ClearCase, compilers, etc.) utilization issues,
- Risk management identification/mitigation process definition issues, and
- Multi-track (e.g., formal and incremental/prototype) development process issues.

#### **1.1.3.3.1.8 TIM Programmatic Issue Guidelines**

Issues which can be categorized into one of the following correspond to valid programmatic category selections:

- Schedule management (realism, completeness, roll-up integrity, etc.) issues,
- Risk management identification/mitigation process effectiveness issues,
- Cost management (personnel, software, hardware, O&M, etc.) issues, and
- Resource management (availability, skill-mix allocation, training, etc.) issues.

#### **1.1.3.3.1.9 TIM Basis of Estimates Issue Guidelines**

Issues which can be categorized into one of the following correspond to valid “basis of estimates” category selections:

- Workload estimation (push/pull load-modeling fidelity) issues,
- Performance estimation (static/dynamic modeling fidelity/statistics) issues,
- End-to-end estimation (system-level static/queuing/data flow, etc.) modeling issues, and
- Cost estimation (personnel, software, hardware, O&M, etc.) issues.

**1.1.3.3.1.10 TIM Operations Issue Guidelines**

Issues which can be categorized into one of the following correspond to valid operations category selections:

- Operational scenario issues,
- Operational testing issues,
- Operational procedure (definition, completeness, realism, etc.) issues,
- Operational routine & off-nominal (contingency/anomaly handling) execution issues,
- Operational maintenance/sustaining engineering/configuration management issues,
- Science software I&T process execution issues, and
- Science data production (scheduling, dependencies, quality control, etc.) issues.

**1.1.3.3.1.11 TIM Release Transition Issue Guidelines**

Issues which can be categorized into one of the following correspond to valid release transition category selections:

- Transition engineering (how, cross-organizational availability, etc.) issues,
- Transition architecture (what, where, when, duration) issues, and
- Transition operations (parallel/overlap/cut-over, routine/contingency) issues.

**1.1.3.3.2 TIM Issue Domain Fields**

*Domain #1* and *Domain #2* metadata items contain identical sets of 29 values within the EOSDIS-IVV repository, except that *Domain #2* additionally contains the optional “N/A” value. These two fields are also combo boxes where the values displayed in Exhibit 1.1.3-8 are displayed for the EOSDIS-IVV repository. There is no implied precedence associated with the two domains other than that the “Milestone” field selection is associated with “Domain #1”.

Domain #1 & Domain #2 Values	EOS Activity/Phase Description
Version 0	EOSDIS Version 0 Operational Prototype
EGS Test Version	EOS Ground System (EGS) ECS IR-1 Configuration
EGS Version 1	EGS Configuration for TRMM Mission
EGS Version 2	EGS Configuration for AM-1/Landsat-7 Missions
EGS Version 3	EGS Configuration for PM-1 Mission
EGS Version 4	EGS Configuration for Follow-On Missions
ECS	EOSDIS Core System (ECS) - Overall
ECS IR-1	ECS Interim Release 1 (IR-1) - Overall
ECS IR-1 SCDO	ECS IR-1 SCDO (SDPS/CSMS)
ECS IR-1 FOS	ECS IR-1 FOS (Included for Consistency)
ECS Rel A	ECS Release A (Rel A) - Overall
ECS Rel A SCDO	ECS Rel A SCDO (SDPS/CSMS)
ECS Rel A FOS	ECS Rel A FOS (AM-1 Test)
ECS Rel B	ECS Release B (Rel B) - Overall
ECS Rel B SCDO	ECS Rel B SCDO (SDPS/CSMS)

ECS Rel B FOS	ECS Rel B FOS (AM-1 Operations)
ECS Rel C	ECS Release C (Rel C) - Overall
ECS Rel C SCDO	ECS Rel C SCDO (SDPS/CSMS)
ECS Rel C FOS	ECS Rel C FOS (PM-1 Operations)
ECS Rel D	ECS Release D (Rel D) - Overall
ECS Rel D SCDO	ECS Rel D SCDO (SDPS/CSMS)
ECS Rel D FOS	ECS Rel D FOS (Follow-On Mission Operations)
EDOS	EOS Data & Operations System Project
EBNet	EOS Backbone Network Project
ETS	EGS Test System Project
DAACs	Distributed Active Archive Centers (GSFC, etc.)
SCFs/Science	Science Computing Facilities/ EOS Science Related
Missions	TRMM, AM-1, Landsat-7, PM-1, etc. Projects
External	NOAA, FDF, etc. (Any "External" Entity)

### Exhibit 1.1.3-8 PITS TIM Domain Values

#### 1.1.3.3.3 TIM Milestone Field

The *Milestone* metadata items contains 12 values within the EOSDIS-IVV repository, including the optional "N/A" value. They are listed in Exhibit 1.1.3-9. A *Milestone* identifies a TIM applicable to a formal project review. A *Milestone*, when applicable, is associated with *Domain #1*.

Milestone Values	Description
SRR	System Requirements Review
SDR	System Design Review
RIR	Release Initiation Review
PDR	Preliminary Design Review
IDR	Incremental Design Review
CDR	Critical Design Review
TRR	Test Readiness Review
CSR	Consent to Ship Review
SORR	System Operational Readiness Review
RRR	Release Readiness Review
ESR	EGS Status Review
N/A	Not Applicable

### Exhibit 1.1.3-9 PITS TIM Milestone Values

#### 1.1.3.3.4 TIM Issue Severity/Criticality Fields

The *Issue Severity* and *Issue Criticality* metadata items each contain 3 values within the EOSDIS-IVV repository. The combination of *Issue Severity* and *Issue Criticality* establishes overall TIM importance. Issues raised in a TIM have the same level-of-importance. The PITS filters-out public issues of marginal-value by only permitting the combinations shown in Exhibit 1.1.3-10. TIMs categorized with a visibility of private is permitted to have all value permutations.

Issue Severity Values	Issue Criticality Values
Major	Critical
Major	Essential
Major	Fulfillment
Moderate	Critical
Moderate	Essential
Minor	Critical

### Exhibit 1.1.3-10 Public Issue Severity & Criticality Combinations

The PITS TIM data entry/edit screen has two combo boxes labeled “Issue Severity” and “Issue Criticality”. Select one of the permissible metadata values for each. The order of entry is important and both entries are mandatory. Entries can be changed at any time prior to the TIM being “Opened”. Thereafter, only personnel with Level 2 access or above can change these entries.

#### 1.1.3.3.5 TIM Visibility Field

The *Visibility* metadata item contains 2 values within the EOSDIS-IVV repository. They are listed in Exhibit 1.1.3-11. The default visibility is public. Once this value is changed to private, the “Issue Severity” and “Issue Criticality” combo boxes are repopulated with the full range of values. Private TIMs provide a mechanism for restricting access to issues which may be of a sensitive nature and need to be maintained within a single organization.

Visibility Values	Description
Public	The TIM is Visible to All PITS Environment Users if Issue Status is not <u>Draft</u>
Private	The TIM is Visible Only to Specific Repository Affiliated Users

### Exhibit 1.1.3-11 PITS TIM Visibility Values

#### 1.1.3.3.6 TIM Issue Status Field

The *Issue Status* metadata item contains 6 values. They are DRAFT, WITHDRAWN, OPEN, CLOSED, CLOSED WITH CONCERNS, and RE-OPENED. However, individuals with level 3 access or higher are only offered a value of Draft when creating new issues. Draft issues are not officially considered to be an issue until opened. Once opened, only individuals with level 2 access or above may change the issue status. Individuals with level 3 access or below are only presented the current status value. Closed with concerns is made available to close issues which may not meet the satisfaction of the originating organization.

#### 1.1.3.3.7 TIM ID Field

Each PITS repository TIM is uniquely named according to the following convention:

“repository-TIM-####”

example: “EOSDIS-IVV-TIM-1052”

TIM naming is automatically generated by the PITS application software when a new TIM is first “Saved”. TIM numbering is initialized to “1000”. The first TIM in each PITS repository is numbered “1001”, the second “1002”, the third “1003”, etc. This field is designated as not editable.

#### **1.1.3.3.8 TIM Date Field**

The *Date* field currently is an editable field so that entry of old issue information may be entered and back dated. Eventually, this field will be changed to not editable so that actual issue entry date information is gathered. Thus, when a state change is noted in the “Issue Status” field the editor has the opportunity to edit the date associated with the state change. A default coinciding to the current date will be displayed when a issue status change is detected. Upon display of a TIM, the date field will be set to the date associated with the current “Issue Status”.

#### **1.1.3.3.9 TIM Issue Originator Field**

The *Issue Originator* field is defaulted to the user that is logged on when the TIM is created. Currently, the field is editable so that when old issue information is being entered a value other than the individual logged in may be assigned. In the future, this will be changed to a display only field.

#### **1.1.3.3.10 TIM State/Date Table**

Above the TIM ID and Date fields is a display only table which reflects TIM status information. The information displayed is a subset of the information maintained in the database. Status information is displayed for Withdrawn, Open, Closed, Closed with Concerns and Re-Opened status values. An additional entry identified as “Updated” is also maintained to reflect the date and individual who last updated (saved) the TIM record.

#### **1.1.3.3.11 TIM Issue Subject/Description Fields**

The *Issue Subject* and *Issue Description* fields are editable text entry fields. For the “Issue Subject”, a relatively short descriptive string containing items on which you may want to perform searches should be utilized. The “Issue Subject” field is utilized when TIMs are displayed in table format (e.g. Issue Selection and Query Results screens). The “Issue Description” field is defined as a long string in the database so that a lengthy description of the issue is supported. The description should not include impacts, recommendations, closure criteria, relationships, or resolution chronology. Separate text entry fields and screens exist for these values.

#### **1.1.3.4 PITS Impact Description Screen**

This screen accommodates the entry of text delineating the impacts associated with the TIM displayed. This is a long string database field which allows a lengthy textual description of the impacts.

The screenshot shows a Windows-style application window titled "Impact Description". At the top left is a menu bar with "Edit". Below the menu bar are two input fields: "Date" with the value "05-01-96" and "Analyst" with the value "Izumi, Debbie". To the right of these fields are two buttons: a grey "Save" button and a red "Exit" button. Below the input fields is a large, multi-line text area. The text area contains the text: "Additional analysis by developers is likely to be necessary for clarification, completion, and correction, possibly impacting product quality and schedule." The text area has a vertical scrollbar on the right side.

**Exhibit 1.1.3-12 PITS Impact Description Screen**

**FIELDS:**

1. Date  
This field is a non editable field which displays the date the associated text was entered or last updated.
2. Analyst  
This field is a non editable field which displays the analyst who entered or last updated the associated text.
3. Multiline Text Entry  
This field is a text entry field where information may be entered or pasted into.

**BUTTONS:**

1. Save  
Selecting this pushbutton when enabled causes changes made to the screen fields to be reflected in the database for the associated TIM.
2. Exit  
Selecting this pushbutton closes this screen and returns control to the parent screen (e.g. TIM Form, Relationships Screen, Resolution Chronology Screen).

The standard Windows "Edit" pulldown menu is also accessible from this screen to allow for cutting, copying, and pasting of information.

### **1.1.3.5 PITS Recommendations Screen**

This screen accomodates the entry of text delineating recommendations associated with the TIM displayed. This is a long string database field which allows a lengthy textual description of the recommendations.

**Exhibit 1.1.3-13 PITS Recommendations Screen**

Since the dialog for recommendations is identical to that for impacts, refer to the PITS Impact Description Screen (section 4.2.3.4) for screen field, button, and menu information.

#### 1.1.3.6 PITS Closure Criteria Screen

This screen accomodates the entry of text delineating closure criteria associated with the TIM displayed. This is a long string database field which allows a lengthy textual description of the closure criteria.

**Exhibit 1.1.3-14 PITS Closure Criteria Screen**

Since the dialog for closure criteria is identical to that for impacts, refer to the PITS Impact Description Screen (section 4.2.3.4) for screen field, button, and menu information.

#### 1.1.3.7 PITS Relationships Screens

This screen displays a list of the items related to the TIM displayed and provides functionality to initiate the addition and deletion of items. A TIM may be related to a Technical Analysis Memorandum (TAM), Discrepancy Report (DR), requirement etc..

**Project Issue Tracking System (PITS) - [Relationships]**

Edit

**TIM ID**  
EOSDIS-IVV - TIM - 1170

**Issue Subject**  
Release B FOS Traceability issues

**Issue Relationships**

Date	Analyst	Type	Relationships
10-18-96	Rao, Gopala	Textual	EOSDIS-IV&V-TAM-05-037-09/04/96
10-18-96	Rao, Gopala	Textual	EOSDIS-IVV-TIM-1051
02-21-97	Jackelen, George	Textual	EOSD-IVV-TAM-08-016-02/24/97, "Qualitative Trace Analysis of th
09-10-97	Williams, Llew	Requirement	FOS-1020#B [VALID 1997-08-08 RTM]
09-10-97	Williams, Llew	Requirement	FOS-1030#B [VALID 1997-08-08 RTM]

☐ Textual  
☒ Requirement

Add Delete View Edit Exit

**Exhibit 1.1.3-15 PITS Relationships Screen****FIELDS:**

1. **TIM ID**  
The TIM ID field is a display only field indicating the TIM for which the displayed relationships are associated with.
2. **Issue Subject**  
This field is a display only field reflecting the subject text for the TIM.
3. **Issue Relationships Table**  
This is a table listing the relationships that have been established for this TIM. Columns include the date added or updated, the analyst, type, and the relationship text or requirement identifier. In the case of a requirement relationship an additional notification is added to indicate if the requirement is valid in the current RTM baseline. By double clicking on an individual row, the relationship display will be displayed in view only mode.

**BUTTONS:**

1. **Add**  
This button initiates the addition of a Textual or a Requirement relationship depending on which selection has been chosen.
  - Textual displays the text entry dialog.
  - Requirement displays the requirement relationship manager dialog.
2. **Delete**  
This button deletes the relationship associated with the table row selection. A table row must first be selected by clicking on the row.
3. **View**

This button initiates the display of the relationship in view only mode. A table row must first be selected by clicking on the desired row for viewing.

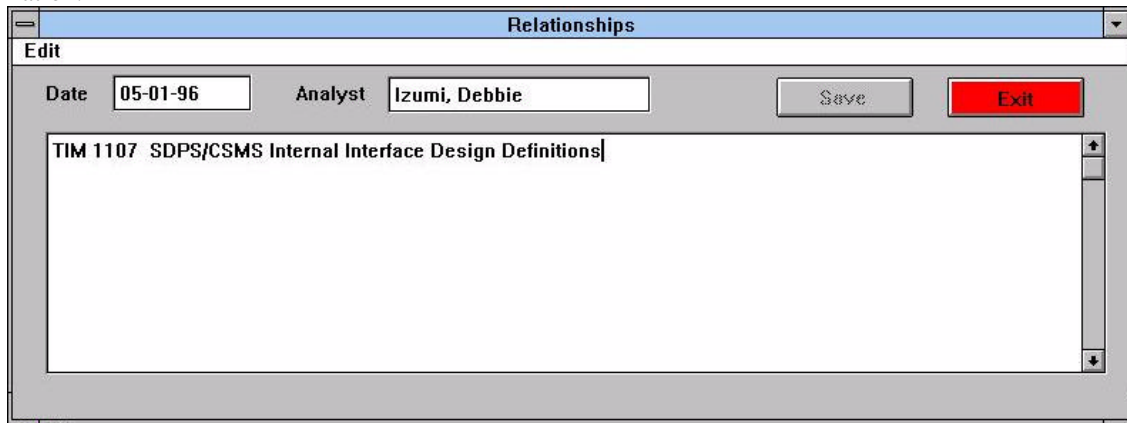
4. Edit

This button initiates the display of the textual relationship in edit mode. Requirement relationships are not editable and will appear in view only mode. A table row must first be selected by clicking on the row which is to be edited.

5. Exit

This button causes this window to be closed and control is returned to the TIM Form window.

The relationship text entry screen is depicted below. Since the dialog for relationship text entry is identical to that for impacts, refer to the PITS Impact Description Screen (section 4.2.3.4) for screen field, button, and menu information.



**Exhibit 1.1.3-16 PITS Relationship Entry Screen**

The requirement relationship manager screen is depicted below. This screen provides functionality to query the requirements table maintained as a part of the ISE tool suite. Requirements are classified by program, class, release, category, and type. Requirements meeting the criteria of a query are displayed in the table as identifier and text pairs. A requirement may be chosen from the table by double clicking on a row. This action places the requirement identifier into the Requirement field in preparation for saving to the database. A requirement identifier may be hand entered into the Requirement field. In this case the tool verifies that the requirement is valid in the current RTM version.

**FIELDS:**

- 20

9. Analyst  
This field is a display only field displaying the current analyst's name that will be saved as author of the relationship.
10. Date  
This field is a display only field displaying the current date that will be saved as date of creation of the relationship.
11. RTM Date  
This field is a display only field displaying the date of the RTM baseline that will be saved with the relationship.
12. Requirement  
This field is an editable field displaying the identifier of the requirement that will be saved with the relationship. Requirements may be hand entered into this field or they may be selected from the requirements table by double clicking on a row.
13. Issue Relationships Table  
This table displays the requirements extracted from the ISE database based on the criteria chosen. The requirement identifier (Paragraph Id) and the text of the requirement are displayed. By double clicking on a row a requirement is chosen for a relationship and its identifier will appear in the requirement field.

**BUTTONS:**

1. Populate  
Selection of this button will submit a query based on the choices made in the PROGRAM, CLASS\_ID, PREFIX, RELEASE, CATEGORY, and TYPE fields. The results of this query will be displayed in the Requirements Table.
2. Save  
Selecting this pushbutton will save the requirement relationship in the database. In the case of a hand entered requirement identifier the requirement is validated in the current RTM baseline and the user is prompted before saving if the requirement is not valid.
3. Exit  
Selecting this pushbutton closes this screen and returns control to the Relationships Screen.

### **1.1.3.8 PITS Resolution Chronology Screens**

This screen displays a list of the chronology status items associated with the TIM being reviewed. This screen also provides functionality to initiate the addition and deletion of chronology items. Since this form is identical to that for text relationships, refer to the PITS Relationships Screen (section 4.2.3.7) for screen field, button, and menu information.

**TIM ID**  
EOSDIS-IVV - TIM - 1108

**Issue Subject**  
SDPS Internal Interface Design Discrepancies

**Resolution Chronology**

Date	Analyst	Resolution Chronology
05-01-96	O'Donnell, Gail	Submitted EOSDIS-IVV-TAM-06-052-05/02/96 Release B SCDO Internal Interface
05-09-96	Izumi, Debbie	On 5/2/96 Darryl Lakins informed IV&V that RID 1108 addressing issues raised
05-17-96	Izumi, Debbie	Added #3 under issue discrepancy and changed severity rating from moderate

Buttons: Add, Delete, View, Edit, Exit

**Exhibit 1.1.3-18 PITS Resolution Chronology Screen**

The resolution chronology entry screen is depicted below. Since the dialog for chronology text entry is identical to that for impacts, refer to the PITS Impact Description Screen (section 4.2.3.4) for screen field, button, and menu information.

**Resolution Chronology**

Edit

Date: 05-17-96 Analyst: Izumi, Debbie

Buttons: Save, Exit

Text Area:  
Added #3 under issue discrepancy and changed severity rating from moderate to severe based on additional analysis (added by original analyst, Gail O'Donnell).

**Exhibit 1.1.3-19 PITS Resolution Chronology Entry Screen**

### 1.1.3.9 PITS Review Item Discrepancy (RID) Screen

RIDs are issues associated with review milestones such as a Critical Design Review (CDR). The PITS supports the RID process by providing functionality to automatically generate the majority of the required RID information from an existing TIM. It also supports the entry or update of the information which can not be logically defaulted. Once a RID has been approved, Email

capabilities are also provided. For additional details on RID approval and mailings refer to sections 4.2.3.18 and 4.2.3.19.

The RID screen below reflects all defaulted field information with a grey background. White background fields are those fields which are editable.

The screenshot displays the PITS RID Screen with the following fields and values:

- Originator:** Pruijn, Barbara
- Organization:** Intermetrics
- Email Address:** IVV-RID@cclink.gblt.inmet.com
- Phone:** 301-982-5414
- Document or Presentation:** 305-CD-024-002
- Section:** N/A
- Page:** N/A
- Figure/Table:** N/A
- Originator Reference:** EO5DIS-IVV-RID-1105
- Category Name:** Data Server (DSS) Design
- Review:** RELEASE B CDR
- Subject:** Incomplete Rel B DSS STMG and DDIST CSCI Designs
- Description:**

The Data Server Subsystem (DSS) Storage Management (STMG) and Data Distribution (DDIST) CSCI designs represented in the CDR 305 subsystem design specification do not completely represent the Release B Level 4 requirements. The following problems were found:

  1. There are a total of 78 STMG and DDIST L4 requirements defined in the 3/1/96 RTM; 18% (14 of 78) of these requirements have been omitted from the 305 design spec trace and therefore do not have traces specified. Two of these 14 requirements appear to be satisfied by the design, however the remaining 12 are not represented in the design.
  2. An additional 12% (9 out of 78) of the STMG and DDIST L4 requirements that are included in the 305 design spec trace matrix are not completely
- Recommendation:**

Recommend the DSS STMG and DDIST designs be completed to provide the detail needed to ensure a smooth transition to the implementation phase. The design should show complete representation of all STMG and DDIST L4 requirements.
- Status:** Submitted
- Buttons:** Print, Save, Exit

**Exhibit 1.1.3-20 PITS RID Screen**

**FIELDS:**

1. **Originator**  
This field is a non editable text field which is defaulted to that of the TIM originator.
2. **Organization**  
This field is a non editable text field which is defaulted to Intermetrics (IV&V Prime Contractor).
3. **Email Address**  
This field is a non editable text field which is defaulted to the IVV-RID mailbox so that response information is received in a central location.
4. **Phone**  
This field is a non editable text field which is defaulted to the Intermetrics Greenbelt office telephone number.
5. **Document or Presentation**  
This is an editable text entry field used to specify either the document or presentation from which the issue arose.
6. **Section**  
This is an editable text entry field used to identify a specific section which the issue is applicable to.
7. **Page**  
This is an editable text entry field used to identify a specific page which the issue is applicable to.
8. **Figure/Table**  
This is an editable text entry field used to identify a specific figure or table which the issue is applicable to.
9. **Originator Reference**  
This is a non editable text field detailing the unique RID identifier. It corresponds to the concatenation of the repository with "RID" with the associated TIM number.

10. Category Name  
This is an editable combo box field populated with the RID categories associated with the review. The submitter should select one of the available categories which is most relative to the issue.
11. Review  
This is an editable text entry field which is defaulted to the concatenation of the TIM Domain #1 value and the TIM Milestone value. This field should be changed to coincide with the RID instructions that are published for each review.
12. Subject  
This is a non editable text field which is defaulted to the TIM subject.
13. Description  
This is a non editable text field which is defaulted to the concatenation of the TIM description and TIM impact description text fields.
14. Recommendation  
This is a non editable text field which is defaulted to the TIM recommendation text field.
15. Status  
This is a non editable display only text field which reflects the current RID state. RIDs go through three states including Draft (created), Approved (approved by IV&V management), and Submitted (mailed to the RID manager, COTR, and the IVV-RID mailbox).

**BUTTONS:**

1. Print  
Selection of this button initiates the printing of the displayed RID to the printer.
2. Save/Approve  
Selection of this button updates the database with the displayed RID values. When initially generating a RID, the button is labeled "Save". Once the RID has been drafted, the button is labeled "Approve". Only individuals with level 2 access or greater are permitted to approve RIDs. Selecting this button when it is labeled "Approve" will transition the state from Draft to Approved.
3. Exit  
Selecting this button will close the RID screen and activate the window previously active prior to display of the RID screen. This could either be the TIM screen or the RID Manager Interface screen.

**1.1.3.10 PITS Issue Selection Screen**

The Issue Selection screen is displayed when the "Edit/View" button is selected from the PITS Executive Interface screen. Upon display, TIMs are selected from the database based upon the previously selected repository and user organization. Users whose accounts are associated with the selected repository get a comprehensive list of TIMs including Draft TIMs. Draft TIMs are not displayed to users associated with a different repository than that being viewed. The primary purpose of this screen is to display important TIM information (e.g. TIM #, Status, Severity, Criticality, and Subject) and to allow TIM selection for either view, edit, or printing.

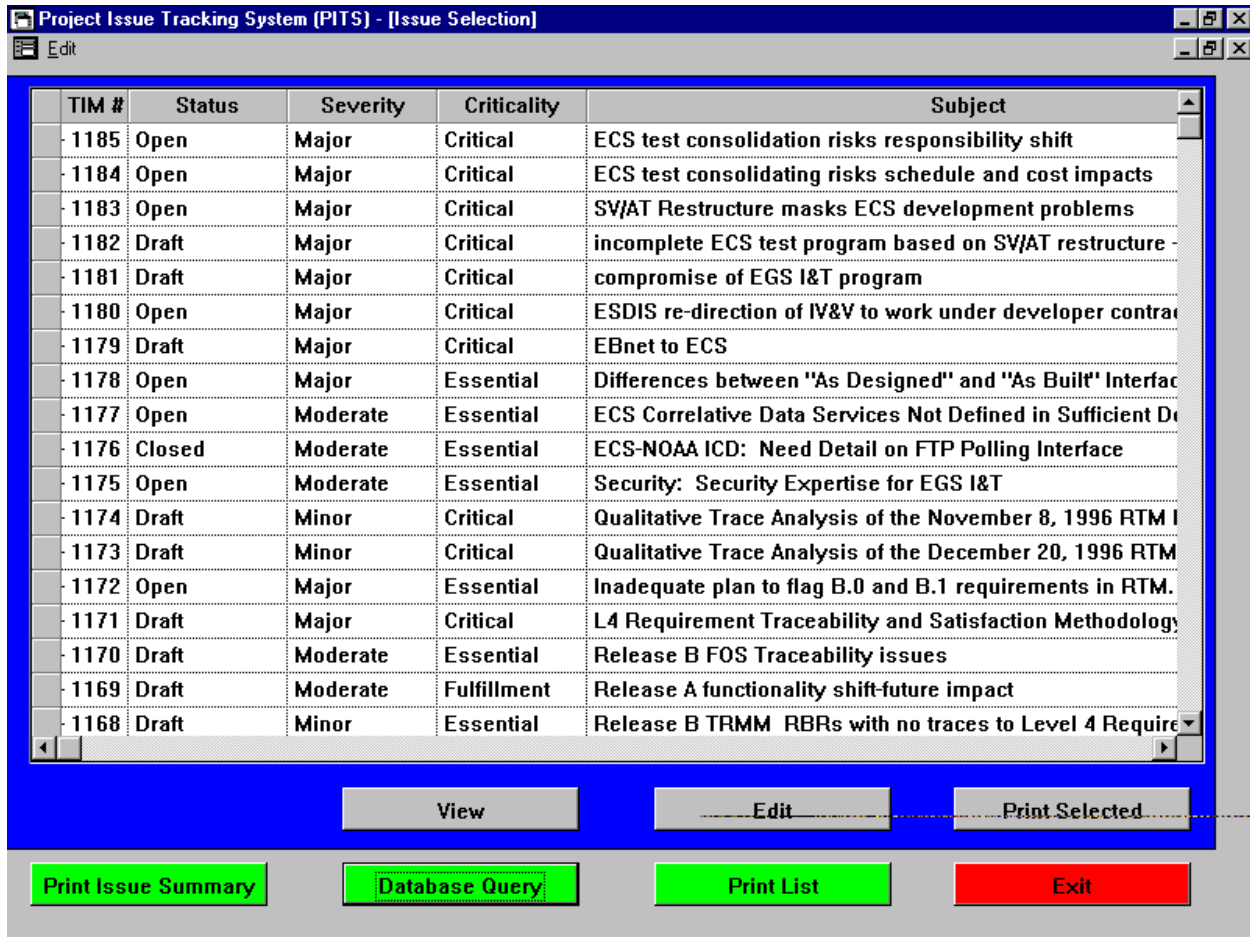


Exhibit 1.1.3-21 PITS Issue Selection Screen

**FIELDS:**

1. TIM Selection Table  
The TIM selection table includes TIM#, Status, Severity, Criticality, and Subject columns. In order to take action on an individual TIM, the user may click on a row to select a TIM. Shift-Click allows for selection of multiple TIMs. This is only useful when used in conjunction with the "Print Selected" button to print all TIMs selected.

**BUTTONS:**

1. View  
Selection of this button will initiate the display of the TIM screen (see section 4.2.3.3) for the selected TIM in view only mode. If no TIM has been selected by clicking on a table row, a message is displayed.
2. Edit  
Selection of this button will initiate the display of the TIM screen (see section 4.2.3.3) for the selected TIM in edit mode. If no TIM has been selected by clicking on a table row, a message is displayed.
3. Print Selected  
Selection of this button will initiate print functionality for all TIMs selected. Multiple TIMs may be selected by using the shift key in conjunction with a mouse click.
4. Print Issue Summary  
When this button is selected, a issue summary report will be generated for all TIMs displayed in the issue selection table. This button is not sensitive to TIM selection as are the previously discussed buttons.
5. Database Query

The selection of this button will initiate the display of the Database Query screen (see section 4.2.3.11). Performing database queries is an excellent way to filter out TIMs for viewing when the number of TIMs in the database becomes large.

6. Print List

Selecting this button initiates print functionality which prints a table similar to that displayed. This is a useful condensation of TIM information for carrying to meetings, reviews, etc..

7. Exit

Selecting this button will close the Issue Selection screen and will return control to the PITS Executive Interface screen (see section 4.2.3.2).

### 1.1.3.11 PITS Database Query Screen

This interface provides the user with the capability to filter out TIMs of interest by metadata values, date range specifications, and search string designations. Basically, all information maintained within the PITS repository is selectable through the dynamic construction of Structured Query Language (SQL) statements based upon operator input.

The screenshot displays the PITS Database Query Screen with the following components:

- Metadata Query:** A form with fields for Category (Issue Requirements, Impact Interfaces), Domain (#1, #2), Issue Status (Open), Milestone, Originator, Issue Severity (Major), Issue Criticality (Critical), and Issue Sponsor.
- Date Query:** A form with fields for From/To dates and buttons for Add Opened, Add Closed, Add Updated, and a checkbox for NOT Updated.
- Search String Query:** A form with fields for Search For and Search In, and buttons for Update Strings and Add to Query.
- Query Selections:** A table showing the current query configuration.

Query Item	Query Value
Issue Category	Requirements
Impact Category	Interfaces
Issue Status	Open
Issue Severity	Major
Issue Criticality	Critical

Additional buttons at the bottom include Clear Query, Submit Query, Delete Item, and Exit.

**Exhibit 1.1.3-22 PITS Database Query Screen**

The following subsections further describe the Metadata Query, Date Query, Search String Query, and Query Selections components of the Database Query screen. The only button which is not applicable to one of these components is the Exit button. When this button is selected, control is returned to the point from which a "Database Query" pushbutton was selected (e.g. PITS Executive Interface Screen or the PITS Issue Selection Screen).

#### 1.1.3.11.1 Metadata Query Frame

In the top left section of the Database Query screen is the Metadata Query frame. This frame permits the operator to select multiple metadata values for one or more of the metadata items maintained for a TIM.

These metadata items were discussed at length in section 4.2.3.3 (TIM screen). Refer to that section and the corresponding subsections for further details regarding the metadata items.

With each metadata item combo box selection a row is added to the “Query Selections” table which is just below the Metadata Query frame. One column identifies the metadata item and the other specifies the metadata value of interest.

**NOTE:** It should be noted that metadata values selected from different metadata items are “ANDed” together when formulating the SQL statement. This means that “Category” selections, “Domain” selections, “Issue Status” selections, “Milestone” selections, “Originator” selections, “Issue Severity” selections, “Issue Criticality” selections, and “Issue Sponsor” selections are all “ANDed”. Multiple metadata value selections for the same metadata item (e.g. Issue Severity) are “Ored” together when building the SQL query.

#### **1.1.3.11.2 Date Query Frame**

In the top right section of the Database Query screen is the Date Query frame. This frame permits the operator to specify opened, closed, and updated date range queries. For example, one could determine the TIMs opened from 05-01-96 to 05-31-96 by specifying these values in the “Opened” from and to fields and selecting the “Add Opened” pushbutton. As a result, a row would be added to the “Query Selections” table reflecting the specified “Opened” date range query. The same query building operations can be utilized for the “Closed” and “Updated” date values maintained within the PITS repository. Note that a “Not Updated” checkbox is available so that TIMs which have not been updated within a specified date range can also be identified. This is very useful in determining TIMs that have become stagnant.

##### **FIELDS:**

1. Opened From/To Fields  
These two fields allow for a date range to be specified in determining TIMs opened within a specific period. The format must be in MM-DD-YY format.
2. Closed From/To Fields  
These two fields allow for a date range to be specified in determining TIMs closed within a specific period. The format must be in MM-DD-YY format.
3. Updated From/To Fields  
These two fields allow for a date range to be specified in determining TIMs updated or not updated within a specific period. The format must be in MM-DD-YY format. To determine TIMs not updated within a specified range, the “Not Updated” checkbox must be checked.
4. NOT Updated  
This checkbox enables the user to query the database for TIMs not updated within the specified “Updated” date range.

##### **BUTTONS:**

1. Add Opened  
Selection of this pushbutton initiates the action of taking the dates specified in the “Opened From/To Fields”, validating the entry, and adding valid entries to the “Query Selections” table.
2. Add Closed  
Selection of this pushbutton initiates the action of taking the dates specified in the “Closed From/To Fields”, validating the entry, and adding valid entries to the “Query Selections” table.
3. Add Updated  
Selection of this pushbutton initiates the action of taking the dates specified in the “Updated From/To Fields”, validating the entry, and adding valid entries to the “Query Selections” table.

### 1.1.3.11.3 Search String Query Frame

On the right side, about half way down, on the Database Query screen is the Search String Query frame. This frame permits the operator to query the active PITS repository for TIMs containing a specific string in one of the many text strings maintained for TIMs. The operator can specify a string search by selecting a search string from the “Search For” combo box and identifying the text field by selecting one from the “Search In” combo box. The selected values can be added to the “Query Selections” table by pressing the “Add to Query” pushbutton. If the string on which you wish to do a search does not exist in the “Search For” combo box, the “Update Strings” pushbutton may be selected to obtain a dialog ( see section 4.2.3.11.3.1) to modify the search string database table.

#### FIELDS:

1. Search For  
This combo box permits selection of the string to search for.
2. Search In  
This combo box permits selection of the string to search in.

#### BUTTONS:

1. Update Strings  
Selection of this pushbutton initiates the display of the Search String dialog screen. This dialog screen is depicted below.
2. Add to Query  
Selection of this pushbutton adds the search criteria specified in the “Search For” and “Search In” fields to the “Query Selections” table.

#### 1.1.3.11.3.1 Update Strings Query Dialog

The Update Strings dialog box is used to modify the search strings stored in the database. Users may create their own set of strings as well as add to the project strings available to all project users. When the dialog is created a table is displayed that contains entries for each of the user’s text strings.

The screenshot shows a window titled "Project Search Strings". Inside the window, there is a table with the same title. The table contains the following text entries: DCE, OODCE, DME, COTS, Object Class, Object Model, and Functional Model. Below the table is a text input field with the label "Add / Modify Search Strings". At the bottom of the window, there are four buttons: "Add", "Delete", "Modify", and "Exit" (which is red). To the right of these buttons is a checkbox labeled "Update Project Search Strings" that is checked.

### **Exhibit 1.1.3-23 Search Strings Screen**

**FIELDS:**

1. Add / Modify Search Strings  
The Add / Modify Search Strings field accepts input from the user.
2. Update Project Search Strings  
The Update Search Strings checkbox is clicked to change the data in the table from the user's search strings to the project strings.

**BUTTONS:**

1. Add  
The Add button saves the text entered into the Add / Modify Search Strings field into the database. The data will be marked as either a user's individual string or as a project string according to the state of the Update Project Strings checkbox.
2. Delete  
The Delete button is clicked to remove a highlighted text string from the database.
3. Modify  
The Modify button permits users to edit existing text strings. The string that is to be edited must first be highlighted in the table.
4. Exit  
The Exit button destroys the Update Strings dialog and returns control to the PITS Database Query screen.

#### **1.1.3.11.4 Query Selection Table**

This table reflects the operator query selection actions. Each row contains a "Query Item" and "Query Value" used in the construction of the SQL query string. Functionality is provided to clear the entire query or an individual row (selection).

**FIELDS:**

1. Query Item Column  
Each row value designates either a metadata item, date query designation, or text string identifier to be used in query construction.
2. Query Value Column  
Each row value designates a metadata value, date range values, or search string value to be used in query construction.

**BUTTONS:**

1. Delete Item  
Selection of this button deletes the selected row from the "Query Selections" table. A row must first be selected.
2. Clear Query  
Selection of this button clears the "Query Selections" table so that the operator can start a new query.
3. Submit Query  
Selection of this button initiates the construction of the SQL query from the "Query Selections" table, executes the query, and initiates the display of the Query Results Screen (see section 4.2.3.12).

#### **1.1.3.12 PITS Query Results Screen**

The PITS Query Results Screen displays the results of a query executed from the PITS Database Query Screen (see section 4.2.3.11). The Query Result Table contains an entry for each TIM meeting query criteria. Information displayed includes: identification number, status, severity, criticality, and subject.

[illegible]

**Exhibit 1.1.3-24 PITS Query Results Screen**

**FIELDS:**

1. **Query String**  
The Query String field displays the SQL string built by the PITS Database Query Screen and used to query the database. It is a display only field.
2. **Result Set Count**  
The Result Set Count field is a display only field that displays the number of issues meeting the criteria contained in the SQL query.

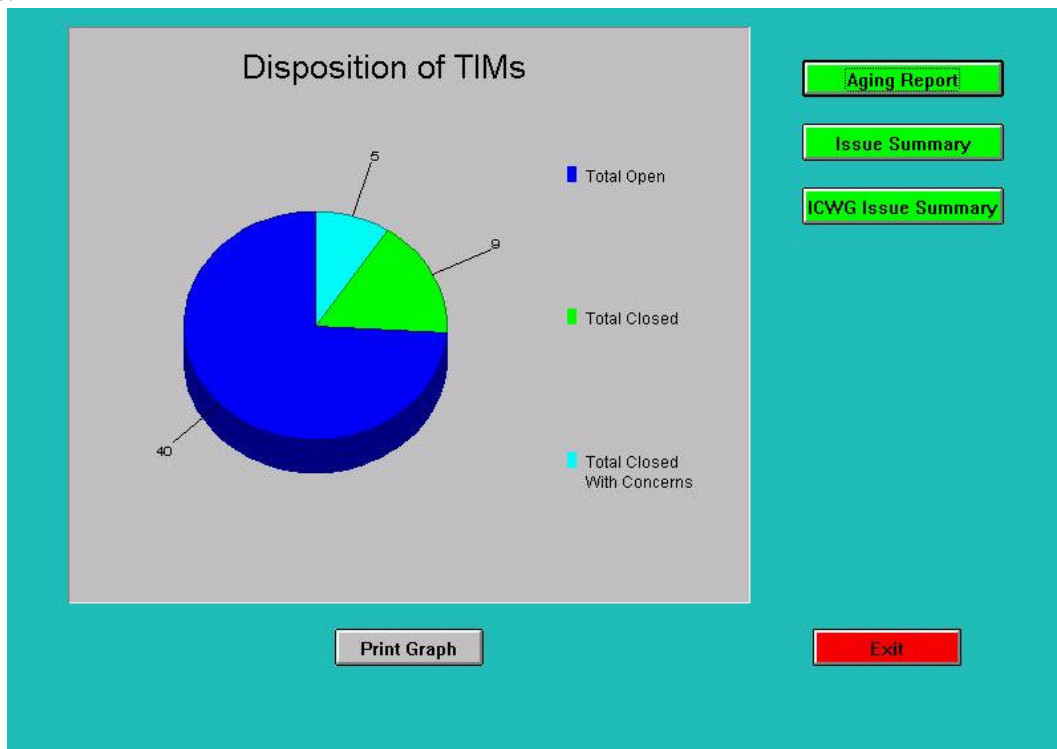
**BUTTONS:**

1. **Edit**  
The Edit button invokes the PITS TIM Screen and populates it with the metadata for the TIM selected from the Query Result Table. The TIM is displayed in an editable form if the user has the necessary access level.
2. **Print Issue Summary**  
The Print Issue Summary button produces a summary report for all the issues displayed in the Query Result table.
3. **View**  
The view button invokes the PITS TIM Screen and populates it with the metadata for the TIM selected from the Query Result Table. The TIM is displayed in a non-editable view only mode.
4. **Print All**  
The Print All button invokes the Print Selection dialog box and enables the user to print individual reports of each of the issues displayed in the Query Result Table.
5. **Print Selected**  
The Print All button invokes the Print Selection dialog box and enables the user to print individual reports of each of the issues highlighted in the Query Result Table. Multiple issues may be highlighted by holding down the shift key and clicking on the rows in the table.
6. **Print List**  
The Print List button prints a listing of the query results as they are displayed in the Query Result Table.

7. New Message  
The New Message button invokes the PITS Message screen (section 4.2.3.17). An issue must be selected from Query Result Table for linking to the message before clicking this button.
8. Exit  
The Exit button destroys this window and returns control to the PITS Database Query screen.

### **1.1.3.13 PITS Issue Reporting Screen**

The PITS Issue Reporting Screen displays a graphic representation of the number of TIMS in the PITS. The graphic consists of a pie graph with sections for “Total Open”, “Total Closed”, and “Total Closed With Concerns”. This screen also provides summary reports and TIM aging metrics.



**Exhibit 1.1.3-25 PITS Issue Reporting Screen**

#### **BUTTONS:**

1. Aging Report  
The Aging Report button displays the PITS Aging Report Screen (Section 4.2.3.14).
2. Issue Summary  
The Issue Summary button prints a report of all EOSDIS-IVV TIMs in the PITS.
3. The ICWG Issue Summary  
The ICGW Issue Summary button prints a summary report of all the open ESDIS-ICWG TIMS in the PITS.
4. Print Graph  
The Print Graph button prints the pie graph displayed on the PITS Issue Reporting screen.
5. Exit  
The Exit button destroys the PITS Issue Reporting screen and returns control to the Executive Interface screen.

### 1.1.3.14 PITS Aging Report Screen

The Aging Report Screen displays a graphic representation of the number of open TIMs and a table showing the disposition of all TIMs. The **graphic** consists of a bar graph. The four bars displayed represent the number of TIMs that have been open for “Less than 30 Days”, “31 to 60 Days”, “61 to 90 Days”, and “More than 90 Days”. The **table** provides metrics information on all TIMs in the PITS. This table furnishes the number of TIMs divided by severity, criticality, days open and status.

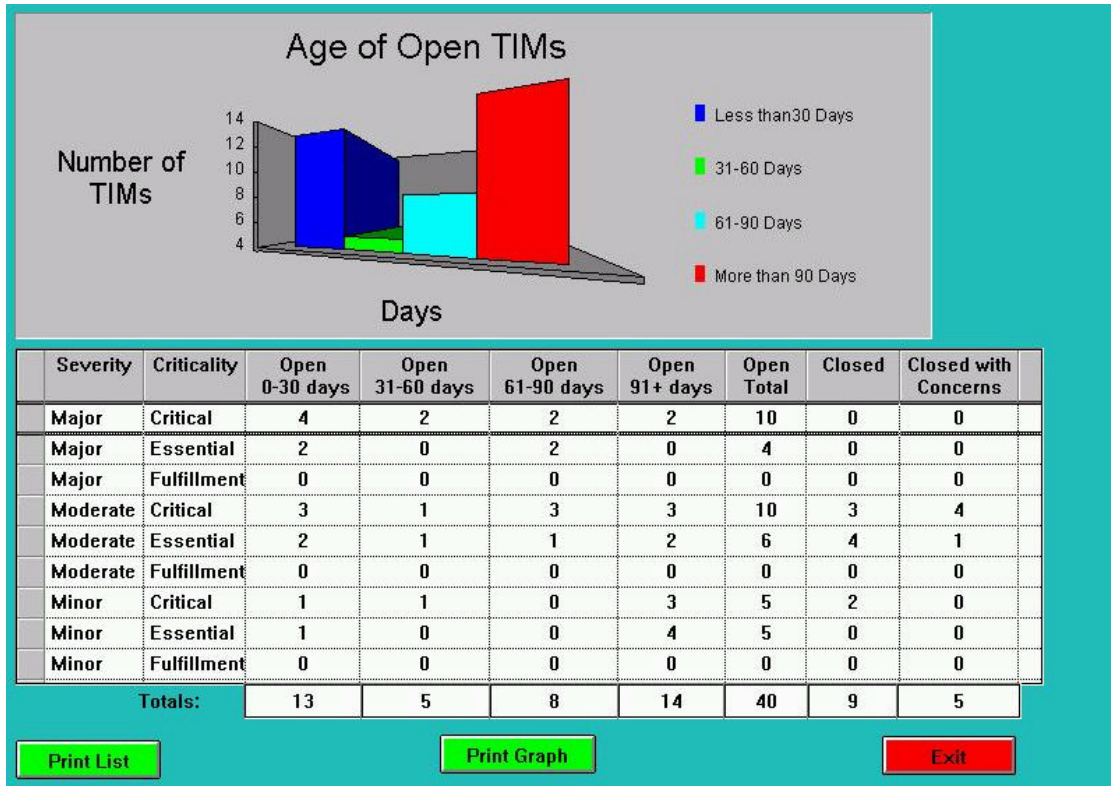


Exhibit 1.1.3-26 PITS Aging Report Screen

#### BUTTONS:

1. Print List  
The Print List button prints the table displayed on the PITS Aging Report screen.
2. Print Graph  
The Print Graph button prints a the bar graph displayed on the PITS Aging Report screen.
3. Exit  
The Exit button destroys the PITS Aging Report Screen and returns control to the PITS Issue Reporting screen.

### 1.1.3.15 PITS RID Manager Interface Screen

The PITS RID Manager Interface screen displays a table with entries for each RID that has been created in the currently selected project. RID information displayed in the table includes: status, originator, reference number, and subject.

EOSVV-0424, Rev. 1-03/11/98      PITS Users Guide      33

EOSVV-0424, Rev. 1-03/11/98      PITS Users Guide      33

## EOSVV-04

- EOSVV-0424, Rev. 1-03/11/98      PITS Users Guide      33

## EOSVV-0424, Rev. 1-03/11/98 PITS User

EOSVV-0424, Rev. 1-03/11/98 PITS Users Guide 33

Subject: ECS Release B CDR RIDs CC: IVV-RID

To: ECS RID Manager

This window displays the RID as it is prepared for parsing and inclusion in the NASA database.

Text: <<<NEW RID>>>  
"Originator" :Prolin, Barbara  
"Organization" :Intermetrics  
"E-Mail Address" :IVV-RID@cclink.gbit.inmet.com  
"Phone No." :301-982-5414  
"Review" :RELEASE B CDR  
"Document or Presentation" :385-CD-024-002  
"Section" :N/A  
"Page" :N/A  
"Figure/Table" :N/A  
"Originator Reference" :EOSDIS-IVV-RID-1105  
"Category Name" :Data Server (DSS) Design  
"Subject" :Incomplete Rel B DSS STMGT and DDIST CSCI Designs  
"Description of Problem or Suggestion" :The Data Server Subsystem (DSS) Storage Management (STMGT) and Data Distribution (DDIST) CSCI designs represented in the CDR 385 subsystem design specification do not completely represent the Release B Level 4 requirements. The following problems were found:  
  
1. There are a total of 78 STMGT and DDIST L4 requirements defined in the 3/1/96 RTM: 18%

Send RID Exit

Exhibit 1.1.3-28 PITS RID Email Interface Screen

**FIELDS:**

1. Subject  
The Subject field is a string mandated by NASA's RID management contractor. This field is populated with the appropriate review designation by the PITS application. This field is not editable.
2. To  
The To field is automatically populated with the name of a ccMail user account that forwards the RIDs to the appropriate NASA account. This field is not editable.
3. Text  
The Text field displays the text of the RID exactly as it appears when mailed. The format has been mandated by the NASA RID management contractor. This format was chosen so that the RIDs could be electronically parsed and inserted into the RID database at GSFC.
4. CC  
The CC field is automatically populated with the name of a ccMail user account (IVV-RID) set up in Greenbelt to collect copies of all RIDs as they are mailed. This field is not editable.

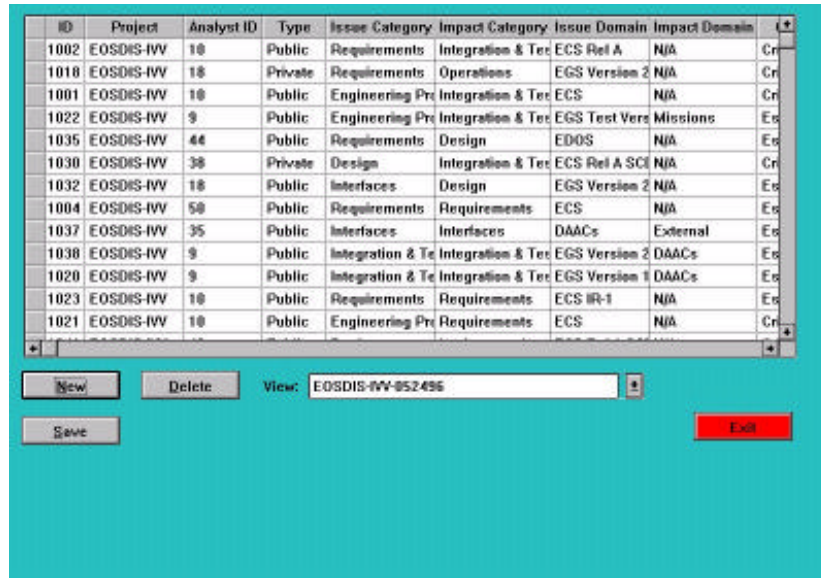
**BUTTONS:**

1. Send RID  
The Send RID button electronically mails the RID to NASA.
2. Exit  
The Exit button destroys the PITS RID Email Interface Screen and disconnects from ccMail and returns control to the PITS RID Manager Interface Screen.

### 1.1.3.17 PITS Database Snapshot Screen

The PITS Database Snapshot screen is accessible to only designated users with the necessary access level. This screen gives users the ability to capture the state of all issues in the database at a particular point in time and save this snapshot for future reference. The screen displays a table with an entry for each issue in the system. Information displayed includes: identification number, project, analyst number, type, issue category, impact category, issue domain, impact domain, criticality, severity, open date, closed or closed with concerns date, last updated date.

**NOTE:** A Unix cron job which automatically takes a snapshot of the database on the last day of each month (after hours) is executed on the Sun SPARCserver where the Sybase PITS repositories are maintained. This automated snapshot mechanism was employed to insure snapshots are taken monthly so that trend analysis can be performed.



ID	Project	Analyst ID	Type	Issue Category	Impact Category	Issue Domain	Impact Domain	
1002	EOSDIS-IVV	10	Public	Requirements	Integration & Test	ECS Rel A	N/A	Cr
1018	EOSDIS-IVV	18	Private	Requirements	Operations	EGS Version 2	N/A	Cr
1001	EOSDIS-IVV	10	Public	Engineering Pro	Integration & Test	ECS	N/A	Cr
1022	EOSDIS-IVV	9	Public	Engineering Pro	Integration & Test	EGS Test Vers	Missions	Es
1035	EOSDIS-IVV	44	Public	Requirements	Design	EDOS	N/A	Es
1030	EOSDIS-IVV	38	Private	Design	Integration & Test	ECS Rel A SC	N/A	Cr
1032	EOSDIS-IVV	18	Public	Interfaces	Design	EGS Version 2	N/A	Es
1004	EOSDIS-IVV	50	Public	Requirements	Requirements	ECS	N/A	Es
1037	EOSDIS-IVV	35	Public	Interfaces	Interfaces	DAACs	External	Es
1038	EOSDIS-IVV	9	Public	Integration & Test	Integration & Test	EGS Version 2	DAACs	Es
1020	EOSDIS-IVV	9	Public	Integration & Test	Integration & Test	EGS Version 1	DAACs	Es
1023	EOSDIS-IVV	10	Public	Requirements	Requirements	ECS IR-1	N/A	Es
1021	EOSDIS-IVV	10	Public	Engineering Pro	Requirements	ECS	N/A	Cr

Buttons: New, Delete, View: EOSDIS-IVV-952496, Save, Exit

**Exhibit 1.1.3-29 PITS Database Snapshot Screen**

**FIELDS:**

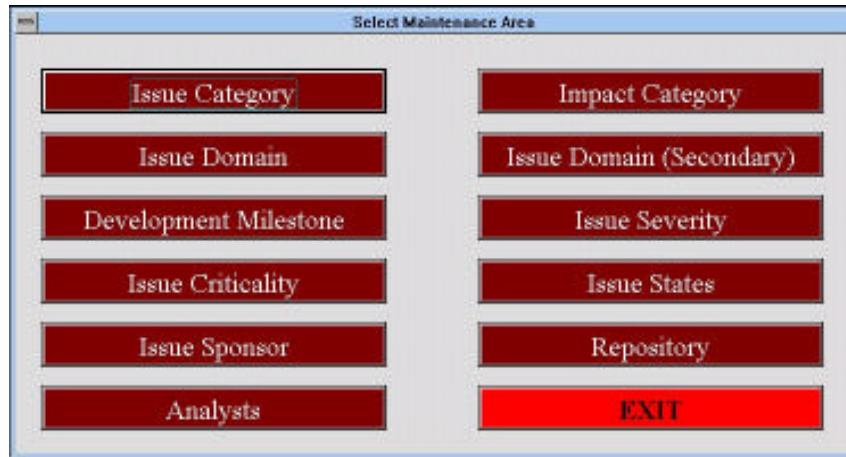
1. View  
The View combo box displays the a unique text string identifying the snapshot by project and date of capture. This string is automatically created at moment when the snapshot is taken. A user may scroll through the list of snapshots displayed and select one by clicking on it. This will populate the table with the data from the snapshot selected.

**BUTTONS:**

1. New  
The New button populates the table with data from the database at the moment it is pressed.
2. Save  
The Save button enables users to save the snapshot displayed in the table for future reference.
3. Delete  
The Delete button enables users to permanently remove a snapshot from the system. First the appropriate snapshot must be selected by highlighting its identification string in the View combo box.
4. Exit  
The Exit button destroys the PITS Database Snapshot Screen and returns control to the PITS Executive Interface screen.

### 1.1.3.18 PITS Maintenance Selection Screen

The PITS Maintenance Selection Screen controls the values displayed in the metadata combo boxes on the PITS Technical Issue Memorandum (TIM) Screen (section 4.2.3.3) and the PITS Database Query Screen (section 4.2.3.11). By controlling the values used to characterize issues in the system from a central screen the PITS may be reconfigured for another project or to accommodate changes to the existing project. Each of the buttons invokes the PITS Maintenance Panel screen populated with the appropriate category of metadata.



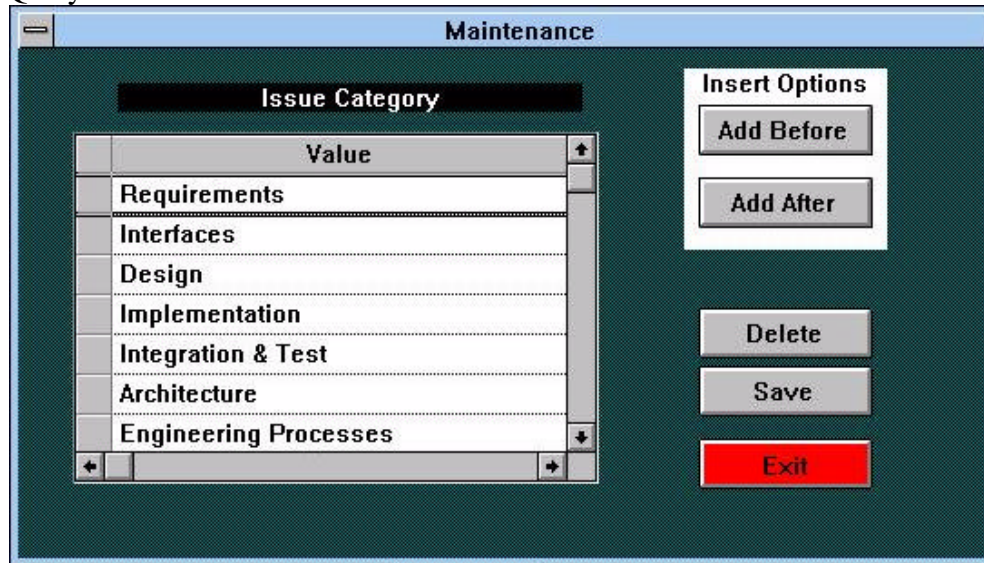
**Exhibit 1.1.3-30 PITS Maintenance Selection Screen**

**BUTTONS:**

1. Issue Category  
The Issue Category button is used to maintain the metadata items associated with the development milestone and project management.
2. Issue Domain  
The Issue Domain button is used to maintain the metadata items associated with project development activities and phases.
3. Development Milestone  
The Development Milestone button is used to maintain the metadata items associated with formal reviews.
4. Issue Criticality  
The Issue Criticality button is used to maintain the metadata items associated with criticality.
5. Issue Sponsor  
The Issue Sponsor button is used to maintain the metadata items associated with individual tasks associated with an issue.
6. Analysts  
The Analysts button is used to maintain information on the users of the PITS. User login, password and access level are maintained.
7. Impact Category  
The Impact Category button is used to maintain the metadata items associated with the development milestone and project management
8. Issue Domain (Secondary)  
The Issue Domain button is used to maintain the metadata items associated with project development activities and phases.
9. Issue Severity  
The Issue Severity button is used to maintain the metadata items associated with severity.
10. Issue States  
The Issue States button is used to maintain the metadata items associated with the status of an issue.
11. Repository  
The Repository button is used to maintain the metadata items associated with different projects accessing the PITS.
12. EXIT  
The button destroys the PITS Maintenance Selection Screen and returns control to the PITS Executive Interface screen.

### 1.1.3.19 PITS Maintenance Panel Screen

The PITS Maintenance Panel Screen is reused to display and modify all the metadata items maintained from the PITS Maintenance Selection screen. The type of maintenance item is displayed at the top of the window. A table is displayed with an entry for each item. Items may be added or deleted. The Insert Options buttons allow the user to place the items in the list in a specific order. This order is then used to display the items on the PITS TIM screen and the PITS Database Query screen.



**Exhibit 1.1.3-31 PITS Maintenance Panel Screen**

#### **BUTTONS:**

1. **Add Before**  
The Add Before button is used to insert an item into the list displayed in a particular spot. First an item must be highlighted by clicking on it, then this button is clicked to add a row to the table above the item that was highlighted. The new item will then be entered into this row and the save button clicked to commit the new item to the database.
2. **Add After**  
The Add After button is used to insert an item into the list displayed in a particular spot. First an item must be highlighted by clicking on it, then this button is clicked to add a row to the table below the item that was highlighted. The new item will then be entered into this row and the save button clicked to commit the new item to the database.
3. **Delete**  
The Delete button is used to remove an item from the database. First the item must be highlighted by clicking on it, then the delete button must be clicked.
4. **Save**  
The Save button is clicked to commit any changes to the database.
5. **Exit**  
The Exit button destroys the PITS Maintenance Panel screen and returns control to the PITS Maintenance Selection screen.

### 1.1.3.20 PITS Change Password Screen

The PITS Change Password Screen allows users to change their passwords. It is invoked from the menu on the PITS Executive Interface screen.

The screenshot shows a 'Change Password' dialog box. It has a title bar with the text 'Change Password'. Inside the dialog, there are four text input fields arranged in a 2x2 grid. The top-left field is labeled 'User Name' and contains the text 'llew'. The top-right field is labeled 'New Password' and is empty. The bottom-left field is labeled 'Old Password' and is empty. The bottom-right field is labeled 'Verification' and is empty. Below the 'Verification' field, there are two buttons: a green button labeled 'Save' and a red button labeled 'Exit'.

**Exhibit 1.1.3-32 PITS Change Password Screen**

**FIELDS:**

1. User Name  
The User Name field displays the system user name maintained in the database.
2. Old Password  
The Old Password field is used to enter the user's old password for verification before changing to a new password.
3. New Password  
The New Password field is used to enter the new password desired by the user.
4. Verification  
The Verification field is used to enter the new password a second time to verify the change.

**BUTTONS:**

1. Save  
The Save button is clicked to commit the password change to the database.
2. Exit  
The Exit button destroys the PITS Change Password screen and returns control to the PITS Executive Interface screen.

### 1.1.4 PITS Client Installation and Startup

The PITS application requires remote access to a Sybase database where issue related data is stored. In order to connect to this remote database, the Sybase Open Client network connectivity software is used. This product must be installed on the client machine before the PITS executable software is loaded. After the connectivity software is installed and tested, a PITS icon should be added to the Microsoft Office Toolbar that references the PITS executable on the local file server. All the Gupta SQLWindows deployment files (dynamic link libraries) and report files should reside with the executable on the local file server. After these few simple steps are performed and an account is obtained, the PITS is available for use. Refer to Appendix A for detailed instructions on Open Client installation.